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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/784,444	02/26/2001	Masami Kanamaru	203370USOX	7166

22850 7590 02/18/2003

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EXAMINER

LEE, RIP A

ART UNIT	PAPER NUMBER
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1713

9

DATE MAILED: 02/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/784,444

Applicant(s)

KANAMARU ET AL.

Examiner

Rip A. Lee

Art Unit

1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 12-18 is/are pending in the application.
- 4a) Of the above claim(s) 16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 12-15, 17 and 18 is/are rejected.
- 7) ☒ Claim(s) 2 and 15 is/are objected to.
- 8) ☒ Claim(s) 1,2 and 12-18 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4,5,6. 6) ☐ Other: _____.

DETAILED ACTION

This office action follows a preliminary amendment in which claims 2-11 were canceled and new claims 12-18 were added.

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1, 2, 12-15, 17, and 18, drawn to a propylene polymer and its method of preparation, classified in class 526, subclass 160.
 - II. Claim 16, drawn to a method of preparing a propylene polymer, classified in class 526, subclass 160.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case, the methods described within the two groups of claims can be used to make chemically distinct polymer products. The method of claim 16 can be used to make polymer other than the propylene polymer of claims 1, 2, 12-14, 15, 17, and 18. Therefore, the two inventions have different functions and completely different effects.

3. Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper.

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4. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

5. During a telephone conversation with Daniel J. Pereira on January 23, 2003, a provisional election was made with traverse to prosecute the invention of Group I, claims 1, 2, 12-14, 15, 17, and 18. Affirmation of this election must be made by applicant in replying to this Office action. Claim 16 has been withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

6. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

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Claim Objections

7. Claim 2 is objected to because of the following informalities: The claim recites T_h based on an elution curve obtained in programmed temperature fractionation. No parameters are imposed, such as solvent, temperature, *etc.* Does the inventive propylene polymer exhibit a value, $T_h \leq 5$, that is independent of fractionation conditions?

8. Claim 15 is objected to because of the following informalities: Please refer to page 2 of the preliminary amendment; (i) line 3; change "at least one selected from" to "at least one compound selected from the group consisting of," (ii) line 4; the word "capable" renders uncertainty to the claim – either compounds (B-1) and (B-2) react with transition metal compound (A) or they do not, (iii) line 11; change "crosslinking" to "bridging" and change "crosslinks" to "bridges." Appropriate corrections are required.

Claim Rejections - 35 USC § 112

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The mathematical relationship between ΔH and T_m is unclear. Rewrite the equation

as: $\Delta H \geq 0.45 T_m + 22$

or as: $\Delta H \geq 0.45 (T_m + 22)$

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Claim Rejections - 35 USC § 102

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

12. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by JP 6-329726. The reference discloses a propylene polymer which has a melting point of 165 °C or higher and a heat of fusion of 107 J/g or higher. Thus, the relationship between ΔH and T_m outlined in the present claim is met by the parameters shown in the prior art.

13. Claims 1 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 8-231640. Example 4 shows a propylene polymer which has a melting point of 144 °C or higher and a heat of fusion of 77 J/g or higher. Thus, the relationship between ΔH and T_m outlined in the present claim is met by the parameters shown in the prior art.

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Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

16. Claims 1, 2, 12-14, 15, 17, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 11-130807 to Kanamaru *et al.*

Kanamaru *et al.* teaches a method for preparing propylene homopolymer and propylene copolymer using metallocenes recited in the present claims (see structure I, page 4, paragraphs [0008] to [0009]). Vapor phase polymerization is contemplated, and the inventors instruct that liquid monomer may be used as solvent (paragraph [0046], lines 47-49 and line 19). Polymers of the invention have *mmmm* value of greater than 60 mole % (paragraph [0054], line 17), and the Table on page 17 displays samples with *mmmm* in the range of 66.8 to 81 mole %. The melting point of these polymers ranges from 113-135 °C. The inventors have not measured the heat of fusion or the intrinsic viscosity of the polymers. This data is therefore absent in the text.

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Since the method of preparation of the polymers is the same as that claimed, including use of the metallocenes that are described in the present claims, one having skill in the art would find it obvious that the prior art polymers would exhibit the properties recited in the present claims. This is especially true in view of the fact that the microstructural features of the prior art polymer are essentially the same as that claimed. Since the PTO can not perform experiments, the burden is shifted to the Applicants to establish an unobviousness difference. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rip A. Lee whose telephone number is (703)306-0094. The examiner can be reached on Monday through Friday from 9:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached at (703)308-2450. The fax phone number for the organization where this application or proceeding is assigned is (703)746-7064. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0661.

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February 11, 2003



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